HANDOUT

THE GREAT LAKES WIND ON THE WATER (WOW) WORK GROUPS

LEGAL/REGULATORY WORK GROUP

Charge for the Group:

What (international, federal, tribal, state and local) regulatory approvals and consultations are required for construction, operation, maintenance and decommissioning of electrical generation and associated electrical lines on Lakes Michigan and Superior from such sources as wind turbines or wave generators?

What legal standards must be met to obtain those approvals and consultations.

What statute changes either are necessary for or would be helpful to developing electrical energy generation on the Great Lakes?

Would development of electrical generation on the Great Lakes have any impacts on developing terrestrial wind generation on tribal lands?

THE HUMAN ENVIRONMENT WORK GROUP

Co-Chairs: Dave Siebert (DNR) / Noel Cutright

The Charge: Frame the full range of environmental issues associated with construction, operation, maintenance and decommissioning of wind turbines and associated collector/transmission lines on Lakes Michigan and Superior.

1. Substantive Areas of Focus:

    a. Bird/bat migration and water bird usage
    b. Fisheries and aquatic resources (including invasive species)
    c. Commercial fishing
    d. Lake bottom effects and impacts associated with the water/land interface
    e. Boating & Recreation
    f. Human health issues—flicker, EMF, noise
    g. Visual impacts – from shore, from boats
    h. Cultural and traditional resources
    i. Shipping, Air Traffic (inc. military operations), Communications

2. For each subject area: what are the information needs, what data are available, where the data gaps are, and what are priorities for data. Are there zones of the lakes for which the level of concern for an issue changes?
3. What can we learn from other states and Europe?
4. Are there environmental impacts unique to Lake Michigan or Lake Superior?
5. Would a PSC/DNR Generic EIS be a good way to investigate the issues and allow for interaction with the public?

ENGINEERING AND ECONOMICS WORK GROUP

Co-Chairs: Dan Sage (PSC), Flora Flygt (ATC)

The Charge / Substantive Areas of Focus:

1. Technology for wind on water
    a. Construction of Turbines, Foundations and Transmission Lines:
        i. Generation
            1. Turbine and Foundation options that are available given lake depths, weather, etc. (should take note of the best-practices as established in existing European off-shore development)
            2. Challenges for generation: Weather/lake icing
            3. Retro-fit of existing in-lake structures?
            4. Wave action
            5. Construction techniques for working on water
        ii. Transmission
            1. Cable
            2. Grid Interconnection Issues
            3. Transition from water to land, where would you bring ashore
            4. Difference in interconnections (ATC, Xcel)
    b. Operation, Maintenance and Decommissioning of Turbines, Foundations and Transmission Lines
2. What data is necessary for further analysis
    a. Wind speeds
    b. Lake Depths
    c. Riparian zones/Lake Bed Grants
    d. Data inventory: what already exists in these areas and what are the gaps in knowledge?
    e. Can any of this data collection be matched up with gaining information in other areas, e.g., wind speed and avian studies?
3. Cost for wind on water
    a. Cost estimates for construction and operation for various scenarios
    b. Economies of scale – how many to make initial project viable?

c. Maintenance
d. How do the costs for wind on water compare with other sources of energy, e.g., terrestrial wind, other renewables, natural gas, coal?

4. Financing for wind on water
    a. Financers – what financing is available and what are the likely terms?
    b. Insurance costs/expectations
    c. Ratebase vs. IPP
    d. Incentives
5. Royalties/payments to adjacent communities/state, how are other states handling this issue? Could this be directed towards goals such as mitigation?
6. How does this fit in, match up with regional transmission issues, e.g., MISO cost-sharing

Community Outreach Group

Co-Chairs: Mike Friis (DOA)/ Mayor Kevin Crawford

The Charge

1. Provide Wisconsin Great Lakes communities (local governments and nongovernmental organizations) with information and solicit feedback on the Great Lakes wind energy task force (or Wind on the Water) through:
    i. Through municipal organization newsletters (Wisconsin Counties and Towns Associations and League of Wisconsin Municipalities).
    ii. Regularly scheduled meetings (with in the August 30 time frame) of interested groups (Lake Michigan and Lake Superior partners, property owners, land trusts, watershed and users groups).
    iii. List servers (Great Lakes Information Network and Great Lakes Forever Town Hall).

2. Review existing community comprehensive plans and existing land use regulations that are applicable to Great Lakes wind energy generation.

3. Relay issues from the solicited comments for consideration of the other work groups.

4. Based on this experience and from other projects' lessons learned, provide suggestions for an informational campaign to any eventual Great Lakes wind energy project.